

Remarks

This is in response to the Official Action mailed August 13, 2004. Claims 13-16, 18-20, 22, 23 and 25 are pending in the application.

Claim Objection

Claim 23 has been objected to because the recitation “SEQ ID NO: 5” was enclosed in parenthesis. In accordance with the Examiner’s helpful suggestion, the claim has been amended to remove the parenthesis. Therefore, reconsideration and withdrawal of the objection is requested.

Rejections Under 35 U.S.C. §112

Claims 18, 22 and 25 have been rejection under 35 U.S.C. §112 as allegedly failing to comply with the written description requirement. In this respect, the Examiner has taken the position that the application does not adequately describe the genera of TREK-1 or TASK, which are each defined in the claims as having two pore domains and four transmembrane segments, as well as by the identification of the compounds that selectively activate the potassium channels in each genus.

Claim 18 has been amended by deleting the term “TREK-1” and further defining the potassium channel as “having an amino acid sequence selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, and an amino acid sequence that is at least ninety percent (90%) identical to SEQ ID NO: 2 or SEQ ID NO: 4”. It is respectfully submitted that the application includes full support for the amendment and for the full scope of the claim at, for example, page 7 (lines 4 and 5) and page 10 (lines 2 and 3, and lines 17 and 18).

Similarly, Claim 22 has been amended to recite that the claimed potassium channel, TASK, has “an amino acid sequence according to SEQ ID NO: 5 or an amino acid sequence that

is at least ninety percent (90%) identical to SEQ ID NO: 5". Because the application includes full support for the genera now recited in Claims 18, 22 and dependent Claim 25, it is respectfully requested that the rejections under 35 U.S.C. §112 be reconsidered and withdrawn.

Inventorship

The Official Action indicates that the written consent of the Assignee and the Statement by Additional Inventor, which were submitted on May 4, 2004, were unsigned. It is noted that the signed documents were submitted to the Patent Office on August 9, 2004. Therefore, it is believed that Michel Fink has now been properly added to the application as an inventor. However, since filing the signed documents, it has come to the Applicants' attention that Fabrice Duprat and François Maingret were also inadvertently omitted from the list of inventors. Therefore, the Applicants submit a second Petition for Correction of Inventorship, executed Statements of No Deceptive Intent from the additional inventors, an executed Consent by the Assignee that the additional inventors be added, and an executed fresh Substitute Declaration signed by all of the inventors. Thus, the correct inventors of the subject matter claimed in this application are as follows: Amanda J. Patel, Eric Honoré, Florian Lesage, Georges Romey, Michel Lazdunski, Michel Fink, Fabrice Duprat and François Maingret.

Rejections Under 35 U.S.C. §102(a)

Claims 13-16 and 18-20 have been rejected under 35 U.S.C. §102(a) as being anticipated by Patel *et al.* (1999) *Inhalational anesthetics activate two pore domain background K⁺ channels*, Nature Neuroscience 2:5, 422-426 (hereinafter "Patel 1999"). The authorship of Patel 1999 is as follows: Amanda J. Patel, Eric Honoré, Florian Lesage, Michel Fink, Georges Romey and Michel Lazdunski. As explained above, each of the authors is an inventor of the subject matter claimed in this application. Therefore, Patel 1999 is not "to another" and is, therefore, not

prior art under §102(a) (or any other paragraph of §102). Thus, it is respectfully requested that the §102(a) rejection based on Patel 1999 be reconsidered and withdrawn.

Rejections Under 35 U.S.C. §103(a)

Claims 13-16, 18 and 20 have been rejected under 35 U.S.C. §103(a) as being allegedly obvious over the combination of Franks and Lieb with Patel *et al.* (1998) *A mammalian two pore domain mechano-gated S-like K⁺ channel*, EMBO 17:15, 4283-4290 (hereinafter “Patel 1998”). The authorship of Patel 1998 is as follows: Amanda J. Patel, Eric Honoré, François Maingret, Florian Lesage, Michel Fink, Fabrice Duprat and Michel Lazdunski. Each of the authors of Patel 1998 is an inventor of the subject matter claimed in this application. Therefore, Patel 1998 is not prior art under §102(a).

This application is a continuation-in-part (CIP) of U.S. Application No. 09/144,194, filed September 1, 1998. This application also claims the benefit of U.S. Provisional Application No. 60/119,727, filed February 12, 1999. The provisional application includes a complete description of COS cells transfected with mouse TREK-1 and human TASK for testing the effects of anesthetics. In addition, the provisional application discloses the sequences of human (SEQ ID NO: 2) and mouse (SEQ ID NO: 4) TREK-1 and the C-terminal portion of human TASK. *See*, pages 16-20 of the provisional application. The provisional application also describes the method for identifying substances capable of producing amnesia and analgesia using the proteins. The ‘914 application describes the sequences of both human and mouse (SEQ ID NO: 5) TASK. *See*, page 7, line 2 and SEQ ID NO: 5 of the ‘914 application. Thus, the priority documents fully support the subject matter of Claims 13-16, 18 and 20.

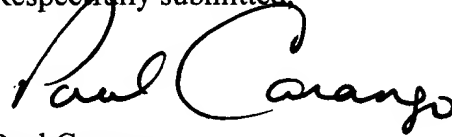
It is believed that Volume 17, Number 15 of the EMBO Journal was published in August 1998. Therefore, Patel 1998 was not published more than one year prior to the priority

applications; and Patel 1998 is also not prior art under §102(b) (or any other paragraph of §102). Thus, Patel 1998 cannot be combined with Franks and Lieb to form a rejection under §103. Because Franks and Lieb, when taken alone, does not describe or suggest each element of the claimed subject matter for at least the reasons set forth in the Official Action, it is requested that the rejection under §103 be reconsidered and withdrawn.

Conclusion

For the reasons set forth above, the claims and specification are fully compliant with the written description requirement. Further, the claims are patentable over the references cited. Therefore, it is believed that the application is now condition for allowance, which action is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, reading "Paul Carango". The signature is fluid and cursive, with the first name "Paul" and last name "Carango" clearly distinguishable.

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